GenCore version 5.1.4_p5_4578

OM protein - protein search, using sw model

Run on: March 14, 2003, 17:35:22 ; Search time 43 Seconds
(without alignments)
3210.410 Million cell updates/sec

Title: US-09-887-527A-60
Perfect score: 5952
Sequence: 1 MYLVAGDRGLAGCGHLLVSL.....GFYSMQKQNHLQADNFYQTV 1036

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_101002:*
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2: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
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23: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	5952	100.0	1036	23	AAE18852	Human pharmaceutic
2	5906	99.2	1036	21	AAY82776	Human chordin rela
3	5906	99.2	1036	21	AAY53034	Human secreted pro
4	5906	99.2	1036	22	AAU12242	Human PRO4330 poly
5	5901	99.1	1036	22	AAU07141	Human CRIM1 protei
6	5402.5	90.8	1037	22	AAU07142	Mouse CRIM1 protei
7	4969	83.5	1048	22	AAU07143	Chicken CRIM1 prot
8	4167	70.0	732	22	AAB61140	Human NOV10 protei
9	2828.5	47.5	503	23	ABG66681	Human novel polype
10	2254	37.9	400	21	AAY82775	Human chordin rela
11	2254	37.9	400	21	AAY53033	Human secreted pro
12	1575	26.5	322	21	AAB40954	Human ORFX ORF718
13	1307	22.0	872	22	AAU07149	C. elegans CRIM1 p
14	1042	17.5	193	22	AAM25238	Human protein sequ
15	582	9.8	225	23	AAU83112	Novel secreted pro
16	506	8.5	810	18	AAW37500	Human nel-related
17	429.5	7.2	816	18	AAW37501	Human nel-related
18	419.5	7.0	361	22	AAM99918	Human polypeptide
19	419	7.0	72	22	ABB28970	Peptide #1621 enco
20	419	7.0	72	22	ABB34137	Peptide #1643 enco
21	419	7.0	72	22	ABB19578	Protein #1577 enco
22	419	7.0	72	22	AAM54928	Human brain expres
23	419	7.0	72	22	AAM67308	Human bone marrow
24	419	7.0	72	22	AAM15145	Peptide #1579 enco
25	419	7.0	72	22	AAM27600	Peptide #1637 enco
26	419	7.0	72	22	AAM02886	Peptide #1568 enco
27	419	7.0	72	23	ABG36955	Human peptide enco
28	416	7.0	73	22	ABB34229	Peptide #1735 enco
29	416	7.0	73	22	ABB19665	Protein #1664 enco
30	416	7.0	73	22	AAM55023	Human brain expres
31	416	7.0	73	22	AAM67408	Human bone marrow
32	416	7.0	73	22	AAM15239	Peptide #1673 enco
33	416	7.0	73	22	AAM27700	Peptide #1737 enco
34	416	7.0	73	22	AAM02982	Peptide #1664 enco
35	416	7.0	73	23	ABG37035	Human peptide enco
36	413.5	6.9	2444	23	ABB07821	Constitutively act
37	413.5	6.9	3680	22	ABB70878	Drosophila melanog
38	404	6.8	445	22	AAE07062	Human gene 12 enco
39	404	6.8	445	23	ABG65086	Human albumin fusi
40	404	6.8	464	22	AAE07119	Human gene 12 enco
41	402	6.8	685	23	AAU99292	Human chordin-like
42	394	6.6	2809	23	AAG66169	Human fibrillin 3
43	378.5	6.4	2912	22	ABG06402	Novel human diagno
44	378	6.4	627	23	AAU99293	Human chordin-like
45	374	6.3	63	22	ABB29742	Peptide #2393 enco

ALIGNMENTS

RESULT 1
AAE18852
ID AAE18852 standard; Protein; 1036 AA.
XX
AC AAE18852;
XX
DT 17-MAY-2002 (first entry)
XX
DE Human pharmaceutical compound protein for cancer treatment.
XX
KW Human; pharmaceutical composition; compound I; tumour; psoriasis; cancer;
KW rheumatoid arthritis; vascular endothelial growth factor; VEGF; therapy;
KW neovascular glaucoma; compound II; angiopoietin/Tie receptor system;
KW retinopathy; glomerulonephritis; diabetic nephropathy; nephrosclerosis;
KW thrombic microangiopathic syndrome; transplantation; glomerulopathy;
KW fibrotic disease; cirrhotic liver; proliferative disease; nephrotropic;
KW ophthalmological; arteriosclerosis; cytostatic; hepatotropic; oedema.
XX
OS Homo sapiens.
XX
PN WO200197850-A2.
XX
PD 27-DEC-2001.
XX
PF 20-JUN-2001; 2001WO-EP06976.
XX
PR 23-JUN-2000; 2000EP-0250194.
PR 28-JUN-2000; 2000EP-0250214.
XX
PA (SCHD) SCHERING AG.
PA (SIEM/) SIEMEISTER G.
PA (HABE/) HABEREY M.
PA (THIE/) THIERAUCH K.

XX
PI Siemeister G, Haberey M, Thierauch K;
XX
DR WPI; 2002-179543/23.
DR N-PSDB; AAD29965.
XX
PT Novel composition useful for treating cancer, comprises agents
PT interfering with vascular endothelial growth factor/VEGF receptor
PT system activity and agents interfering with Angiopoietin/Tie receptor
PT system function -
XX
PS Claim 13; Page 69-70; 79pp; English.
XX
CC The present invention relates to a pharmaceutical composition comprising
CC a combination of substances (compound I) interfering with the biological
CC activity of vascular endothelial growth factor (VEGF)/VEGF receptor
CC systems and substances (compound II) interfering with the biological
CC function of angiopoietin/Tie receptor systems. The pharmaceutical
CC composition is useful for the production of a medicament for the
CC treatment of tumours, cancers, psoriasis, arthritis, such as rheumatoid
CC arthritis, haemangioma, angiofibroma, eye disease such as diabetic
CC retinopathy, neovascular glaucoma, kidney disease such as
CC glomerulonephritis, diabetic nephropathy, malignant nephrosclerosis,
CC thrombic microangiopathic syndrome, transplantation rejections and
CC glomerulopathy, fibrotic disease such as cirrhotic liver, mesangial cell
CC proliferative diseases, arteriosclerosis, damage of nerve tissues,
CC suppression of the ascites formation in patients and suppression of VEGF
CC oedemas. The present sequence is human pharmaceutical compound protein
CC used in the invention.
XX
SQ Sequence 1036 AA;

Query Match 100.0%; Score 5952; DB 23; Length 1036;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1036; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy       1 MYLVAGDRGLAGCGHLLVSLLGLLLLPARSGTRALVCLPCDESKCEEPRNRPGSIVQGVC 60
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Db       1 MYLVAGDRGLAGCGHLLVSLLGLLLLPARSGTRALVCLPCDESKCEEPRNRPGSIVQGVC 60

Qy      61 GCCYTCASQGNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GCCYTCASQGNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120

Qy     121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180

Qy     181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240

Qy     241 CCDLYECKPVFGVDCRTVECPTVQQTACPPDSYETQVRLTADGCCTLPTRCECLSGLCGF 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 CCDLYECKPVFGVDCRTVECPTVQQTACPPDSYETQVRLTADGCCTLPTRCECLSGLCGF 300

Qy     301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQ 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQ 360

Qy     361 GGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWREDD 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 GGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWREDD 420

Qy     421 CTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTRK 480
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 CTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTRK 480

Qy     481 DCINGFKRDHNGCRTCQCINTQELCSERKQGCTLNCPFGFLTDAQNCEICECRPRPKKCR 540
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Db     481 DCINGFKRDHNGCRTCQCINTQELCSERKQGCTLNCPFGFLTDAQNCEICECRPRPKKCR 540

Qy     541 PIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 PIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG 600

Qy     601 PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCP 660
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCP 660

Qy     661 SCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 SCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720

Qy     721 QNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWKPDVCTSCICIDS 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 QNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWKPDVCTSCICIDS 780

Qy     781 VISCFSESCPSVSCERPVLRKGQCCPYCIKDTIPKKVVCHFSGKAYADEERWDLDSCTHC 840
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 VISCFSESCPSVSCERPVLRKGQCCPYCIKDTIPKKVVCHFSGKAYADEERWDLDSCTHC 840

Qy     841 YCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 YCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP 900

Qy     901 LWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDSIASVVVPIIICLSIIIAFLFI 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     901 LWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDSIASVVVPIIICLSIIIAFLFI 960

Qy     961 NQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFYS 1020
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Db     961 NQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFYS 1020

Qy    1021 MQKQNHLQADNFYQTV 1036
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Db    1021 MQKQNHLQADNFYQTV 1036
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RESULT 2
AAY82776
ID AAY82776 standard; Protein; 1036 AA.
XX
AC AAY82776;
XX
DT 19-JUN-2000 (first entry)
XX
DE Human chordin related protein (Clone dj167_19).
XX
KW Chordin related protein; cartilage; bone; connective tissue;
KW periodontal disease; osteoporosis; burn; incision; ulcer; neuron;
KW astrocyte; glial cell; transplantation; nerve; epidermis; muscle;
KW liver; brain; lung; cardiac; pancreas; kidney; growth;
KW differentiation; TGF-Beta; angiogenesis; chemotaxis;
KW chemoattraction; collagen synthesis; fibrosis; cell adhesion;
KW cell migration; fertility; reproduction; haematopoiesis;
KW erythroid cell; tumour; dietary supplement; growth medium.
XX
OS Homo sapiens.
XX
PN WO200009551-A1.
XX
PD 24-FEB-2000.
XX
PF 10-AUG-1999; 99WO-US18117.
XX
PR 10-AUG-1998; 98US-0095880.
PR 06-MAY-1999; 99US-0306111.
XX
PA (GEMY) GENETICS INST INC.
XX
PI Jacobs K, Mccoy JM, Lavallie ER, Collins-racie LA, Merberg D;
PI Treacy M, Diblasio-smith E, Widom A;
XX
DR WPI; 2000-205978/18.
DR N-PSDB; AAZ93172.

XX
PT New polynucleotides encoding secreted human proteins, useful for
PT treating e.g. broken bones, craniofacial defects, peridontal disease,
PT osteoporosis, burns, incisions or ulcers -
XX
PS Claim 21; Page 94-98; 105pp; English.
XX
CC The human chordin related protein and polynucleotides encoding them
CC are predicted to have biological activities which would make them
CC suitable for treating, preventing or ameliorating medical conditions
CC which involve defects in cartilage, bone or connective tissue
CC formation and damage to cartilage, bone or connective tissue, e.g.
CC broken bones, congenital, trauma-induced, or
CC oncologic-resection-induced craniofacial defects, periodontal
CC disease, defects in the periodontal ligament or attachment apparatus,
CC damage to the periodontal ligament or attachment apparatus,
CC osteoporosis, burns, incisions or ulcers. The proteins may also
CC affect neuronal, astrocytic, and glial cell survival and therefore be
CC useful in transplantation and treatment of conditions exhibiting a
CC decrease in neuronal survival and repair. The proteins may also be
CC useful for the treatment of conditions related to other types of
CC tissue, such as nerve, epidermis, muscle, and other organs such as
CC liver, brain, lung, cardiac, pancreas, and kidney tissue. The
CC proteins may further be useful for the treatment of relatively
CC undifferentiated cell populations, such as embryonic cells, or stem
CC cells, to enhance growth and/or differentiation of the cells.
CC The proteins may also have other useful properties characteristic of
CC the TGF-beta superfamily of proteins. Such properties include
CC angiogenic, chemotactic, and/or chemoattractant properties, and
CC effects on cells including induction or inhibition of collagen
CC synthesis, fibrosis, differentiation responses, cell proliferative
CC responses, and responses involving cell adhesion, migration, and
CC extracellular matrices. These properties make the proteins potential
CC agents for wound healing, reduction of fibrosis, and reduction of
CC scar tissue formation. Chordin-related proteins may also be useful
CC for advancement of the onset of fertility in sexually immature
CC mammals, so as to increase the lifetime reproductive performance of
CC domestic animals such as cows, sheep and pigs. Chordin-related
CC proteins may also be useful in modulating hematopoiesis by inducing
CC the differentiation of erythroid cells, for suppressing the
CC development of gonadal tumors, or for augmenting the activity of
CC BMPs. The proteins may also have value as a dietary supplement, or
CC as a component of cell culture media.
XX
SQ Sequence 1036 AA;

Query Match 99.2%; Score 5906; DB 21; Length 1036;
Best Local Similarity 99.3%; Pred. No. 0;
Matches 1029; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

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Qy       1 MYLVAGDRGLAGCGHLLVSLLGLLLLPARSGTRALVCLPCDESKCEEPRNRPGSIVQGVC 60
Db       1 MYLVAGDRGLAGCGHLLVSLLGLLLLLARSGTRALVCLPCDESKCEEPRNCPGSIVQGVC 60

Qy      61 GCCYTCASQGNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120
Db      61 GCCYTCASQRNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120

Qy     121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180
Db     121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180

Qy     181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240
Db     181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240

Qy     241 CCDLYECKPVFGVDCRTVECPTVQQTACPPDSYETQVRLTADGCCTLPTRCECLSGLCGF 300
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Qy     301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQ 360
Db     301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQ 360

Qy     361 GGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWREDD 420
Db     361 GGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWREDD 420

Qy     421 CTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTRK 480
Db     421 CTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTGK 480

Qy     481 DCINGFKRDHNGCRTCQCINTQELCSERKQGCTLNCPFGFLTDAQNCEICECRPRPKKCR 540
Db     481 DCINGFKRDHNGCRTCQCINTEELCSERKQGCTLNCPFGFLTDAQNCEICECRPRPKKCR 540

Qy     541 PIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG 600
Db     541 PIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG 600

Qy     601 PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCP 660
Db     601 PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCP 660

Qy     661 SCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720
Db     661 SCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720

Qy     721 QNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWKPDVCTSCICIDS 780
Db     721 QNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWKPDVCTSCICIDS 780

Qy     781 VISCFSESCPSVSCERPVLRKGQCCPYCIKDTIPKKVVCHFSGKAYADEERWDLDSCTHC 840
Db     781 VISCFSESCPSVSCERPVLRKGQCCPYCIEDTIPKKVVCHFSGKAYADEERWDLDSCTHC 840

Qy     841 YCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP 900
Db     841 YCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP 900

Qy     901 LWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDSIASVVVPIIICLSIIIAFLFI 960
Db     901 LWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDSIASVVVPIIICLSIIIAFLFI 960

Qy     961 NQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFYS 1020
Db     961 NQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFYS 1020

Qy    1021 MQKQNHLQADNFYQTV 1036
Db    1021 MQKQNHLQADNFYQTV 1036
```

RESULT 3
AAY53034
ID AAY53034 standard; Protein; 1036 AA.
XX
AC AAY53034;
XX
DT 29-FEB-2000 (first entry)
XX
DE Human secreted protein clone dj167_19 protein sequence SEQ ID NO:74.
XX
KW Human; secreted protein; nutritional; cytokine; cell proliferation;
KW differentiation; immune stimulating; vaccine; suppression;
KW haematopoiesis regulation; tissue growth; activin; inhibin;
KW chemotactic; chemokinetic; haemostatic; thrombolytic; receptor;
KW ligand; anti-inflammatory; cadherin; tumour invasion suppressor;
KW tumour inhibition; gene therapy.
XX
OS Homo sapiens.
XX
PN WO9957132-A1.
XX
PD 11-NOV-1999.
XX

```
PF   07-MAY-1999;   99WO-US09970.
XX
PR   07-MAY-1998;   98US-0084564.
PR   02-JUN-1998;   98US-0087645.
PR   22-JUL-1998;   98US-0093712.
PR   31-JUL-1998;   98US-0094935.
PR   10-AUG-1998;   98US-0095880.
PR   11-AUG-1998;   98US-0096068.
PR   06-MAY-1999;   99US-0096068.
XX
PA   (GEMY ) GENETICS INST INC.
XX
PI   Jacobs K,  McCoy JM,  LaVallie ER,  Collins-Racie LA,  Evans C;
PI   Merberg D,  Treacy M,  Agostino MJ,  Steininger RJ,  Bowman MR;
PI   DiBlasio-Smith E,  Widom A;
XX
DR   WPI; 2000-052937/04.
DR   N-PSDB; AAZ33352.
XX
PT   New polynucleotides encoding secreted human proteins, derived from
PT   adult placenta, adult retina, fetal brain, fetal  -
XX
PS   Claim 83; Page 426-429; 492pp; English.
XX
CC   The present invention describes new human secreted proteins which were
CC   isolated from adult placenta, adult retina, foetal brain, foetal kidney,
CC   adult blood, adult brain, adult thyroid, adult bladder, adult neural
CC   tissue, adult testes, and adult lymph node cDNA libraries. The human
CC   secreted proteins, and the polynucleotides encoding them, are predicted
CC   to have biological activities which would make them suitable for
CC   treating, preventing or ameliorating medical conditions in humans and
CC   animals. Suggested activities include nutritional activity, cytokine
CC   and cell proliferation/differentiation activity, immune stimulating
CC   (e.g. as vaccines) or suppressing activity, haematopoiesis regulating
CC   activity, tissue growth activity, activin/inhibin activity,
CC   chemotactic/chemokinetic activity, haemostatic and thrombolytic
CC   activity, receptor/ligand activity, anti-inflammatory activity,
CC   cadherin/tumour invasion suppressor activity, and tumour inhibition
CC   activity. The polynucleotides are also stated to be useful for gene
CC   therapy. AAZ33316 to AAZ33373 encode human secreted proteins, and
CC   AAY52998 to AAY53060 represent human secreted proteins, given in the
CC   present invention.
XX
SQ   Sequence   1036 AA;

  Query Match             99.2%;  Score 5906;  DB 21;  Length 1036;
  Best Local Similarity   99.3%;  Pred. No. 0;
  Matches 1029;  Conservative    2;  Mismatches    5;  Indels    0;  Gaps    0;

Qy       1 MYLVAGDRGLAGCGHLLVSLLGLLLLPARSGTRALVCLPCDESKCEEPRNRPGSIVQGVC 60
           |||||||||||||||||||||||||| |||||||||||||||||||| |||||||||
Db       1 MYLVAGDRGLAGCGHLLVSLLGLLLLARSGTRALVCLPCDESKCEEPRNCPGSIVQGVC 60

Qy      61 GCCYTCASQGNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120
           ||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GCCYTCASQRNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120

Qy     121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180

Qy     181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240

Qy     241 CCDLYECKPVFGVDCRTVECPTVQQTACPPDSYETQVRLTADGCCTLPTRCECLSGLCGF 300
           |||||||||||||||||| ||||||||||||||||||||||||||||||||||||||||
Db     241 CCDLYECKPVFGVDCRTVECPPVQQTACPPDSYETQVRLTADGCCTLPTRCECLSGLCGF 300

Qy     301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQ 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQ 360

Qy     361 GGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWREDD 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 GGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWREDD 420

Qy     421 CTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTRK 480
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| |
Db     421 CTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTGK 480

Qy     481 DCINGFKRDHNGCRTCQCINTQELCSERKQGCTLNCPFGFLTDAQNCEICECRPRPKKCR 540
           |||||||||||||||||||:|||||||||||||||||||||||||||||||||||||||
Db     481 DCINGFKRDHNGCRTCQCINTEELCSERKQGCTLNCPFGFLTDAQNCEICECRPRPKKCR 540

Qy     541 PIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 PIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG 600

Qy     601 PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCP 660
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCP 660

Qy     661 SCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 SCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720

Qy     721 QNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWKPDVCTSCICIDS 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 QNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWKPDVCTSCICIDS 780

Qy     781 VISCFSESCPSVSCERPVLRKGQCCPYCIKDTIPKKVVCHFSGKAYADEERWDLDSCTHC 840
           |||||||||||||||||||||||||:|||||||||||||||||||||||||||||||||
Db     781 VISCFSESCPSVSCERPVLRKGQCCPYCIEDTIPKKVVCHFSGKAYADEERWDLDSCTHC 840

Qy     841 YCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 YCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP 900

Qy     901 LWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDSIASVVVPIIICLSIIIAFLFI 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     901 LWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDSIASVVVPIIICLSIIIAFLFI 960

Qy     961 NQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFYS 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     961 NQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFYS 1020

Qy    1021 MQKQNHLQADNFYQTV 1036
           ||||||||||||||||
Db    1021 MQKQNHLQADNFYQTV 1036


RESULT 4
AAU12242
ID   AAU12242 standard; Protein; 1036 AA.
XX
AC   AAU12242;
XX
DT   24-OCT-2001  (first entry)
XX
DE   Human PRO4330 polypeptide sequence.
XX
KW   Human secretory and transmembrane; PRO; mammalian; cancer; lung;
KW   breast; prostate; cervical; tumour necrosis factor-alpha; TNF-alpha;
KW   cartilage; ear; proliferation; glucose; free fatty acid; skeletal muscle;
KW   adipocyte; A-peptide; factor VIIA; gene therapy.
XX
OS   Homo sapiens.
XX
PN   WO200140466-A2.
XX
PD   07-JUN-2001.
XX
PF   01-DEC-2000; 2000WO-US32678.
XX
PR   01-DEC-1999;   99WO-US28301.
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PR   01-DEC-1999;   99WO-US28634.
PR   02-DEC-1999;   99WO-US28551.
PR   02-DEC-1999;   99WO-US28564.
PR   02-DEC-1999;   99WO-US28565.
PR   09-DEC-1999;   99US-0170262.
PR   16-DEC-1999;   99WO-US30095.
PR   20-DEC-1999;   99WO-US30911.
PR   20-DEC-1999;   99WO-US30999.
PR   30-DEC-1999;   99WO-US31243.
PR   06-JAN-2000; 2000WO-US00277.
PR   06-JAN-2000; 2000WO-US00376.
PR   11-FEB-2000; 2000WO-US03565.
PR   18-FEB-2000; 2000WO-US04341.
PR   18-FEB-2000; 2000WO-US04342.
PR   22-FEB-2000; 2000WO-US04414.
PR   24-FEB-2000; 2000WO-US04914.
PR   24-FEB-2000; 2000WO-US05004.
PR   01-MAR-2000; 2000WO-US05601.
PR   20-MAR-2000; 2000WO-US07377.
PR   21-MAR-2000; 2000WO-US07532.
PR   30-MAR-2000; 2000WO-US08439.
PR   17-MAY-2000; 2000WO-US13705.
PR   22-MAY-2000; 2000WO-US14042.
PR   30-MAY-2000; 2000WO-US14941.
PR   02-JUN-2000; 2000WO-US15264.
PR   10-NOV-2000; 2000WO-US30873.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Baker KP, Beresini M, Deforge L, Desnoyers L, Filvaroff E, Gao W;
PI   Gerritsen ME, Goddard A, Godowski PJ, Gurney AL, Sherwood S;
PI   Smith V, Stewart TA, Tumas D, Watanabe CK, Wood WI, Zhang Z;
XX
DR   WPI; 2001-408281/43.
DR   N-PSDB; AAS21314.
XX
PT   Isolated, secretory and transmembrane PRO polypeptide used to detect
PT   other PRO polypeptides, link bioactive molecules to cells expressing
PT   PRO polypeptides, and detect the presence of mammalian tumours e.g.
PT   lung, breast, prostate, cervical -
XX
PS   Claim 12; Fig 142; 813pp; English.
XX
CC   AAU12172-AAU12446 represent novel human secretory and transmembrane
CC   PRO polypeptides. The PRO polypeptides are useful to detect other
CC   PRO polypeptides, to link bioactive molecules to cells expressing
CC   PRO polypeptides, to modulate biological activities of cells expressing
CC   PRO polypeptides, and to detect the presence of mammalian lung, colon,
CC   breast, prostate, rectal, cervical or liver tumours by comparing PRO
CC   polypeptide expression in a cell sample to that in a control sample.
CC   Some of the 275 sequences are also useful to stimulate the release of
CC   tumour necrosis factor-alpha (TNF-alpha) from human blood, the
CC   proliferation or differentiation of chondrocytes, the proliferation or
CC   gene expression in pericyte cells, the release of proteoglycans from
CC   cartilage, the proliferation of inner ear utricular supporting cells or
CC   of T-lymphocytes, the release of a cytokine from peripheral blood
CC   monocytes (PBMCs), or the proliferation of endothelial cells. Some of
CC   the PRO polypeptides may modulate glucose or free fatty acid uptake by
CC   skeletal muscle cells or by adipocytes; or inhibit binding of A-peptide
CC   to factor VIIA. The PRO polypeptides can be used in assays to identify
CC   molecules involved in binding interactions. The polynucleotides encoding
CC   PRO polypeptides can be used to generate probes, antisense RNA/DNA,
CC   transgenic or knock out animals and can be used in gene therapy.
XX
SQ   Sequence   1036 AA;

  Query Match            99.2%;  Score 5906;  DB 22;  Length 1036;
  Best Local Similarity  99.3%;  Pred. No. 0;
  Matches 1029;  Conservative    2;  Mismatches    5;  Indels    0;  Gaps    0;

Qy       1 MYLVAGDRGLAGCGHLLVSLLGLLLLPARSGTRALVCLPCDESKCEEPRNRPGSIVQGVC 60
           |||||||||||||||||||||||||| |||||||||||||||||||| |||||||||
Db       1 MYLVAGDRGLAGCGHLLVSLLGLLLLARSGTRALVCLPCDESKCEEPRNCPGSIVQGVC 60

Qy      61 GCCYTCASQGNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120
           ||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GCCYTCASQRNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120

Qy     121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180

Qy     181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240
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Db     181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240

Qy     241 CCDLYECKPVFGVDCRTVECPTVQQTACPPDSYETQVRLTADGCCTLPTRCECLSGLCGF 300
           |||||||||||||||||||| ||||||||||||||||||||||||||||||||||||||
Db     241 CCDLYECKPVFGVDCRTVECPPVQQTACPPDSYETQVRLTADGCCTLPTRCECLSGLCGF 300

Qy     301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQ 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQ 360

Qy     361 GGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWREDD 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 GGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWREDD 420

Qy     421 CTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTRK 480
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| |
Db     421 CTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTGK 480

Qy     481 DCINGFKRDHNGCRTCQCINTQELCSERKQGCTLNCPFGFLTDAQNCEICECRPRPKKCR 540
           ||||||||||||||||||||:|||||||||||||||||||||||||||||||||||||||
Db     481 DCINGFKRDHNGCRTCQCINTEELCSERKQGCTLNCPFGFLTDAQNCEICECRPRPKKCR 540

Qy     541 PIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 PIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG 600

Qy     601 PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCP 660
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCP 660

Qy     661 SCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 SCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720

Qy     721 QNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWKPDVCTSCICIDS 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 QNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWKPDVCTSCICIDS 780

Qy     781 VISCFSESCPSVSCERPVLRKGQCCPYCIKDTIPKKVVCHFSGKAYADEERWDLDSCTHC 840
           |||||||||||||||||||||||||:||||||||||||||||||||||||||||||||||
Db     781 VISCFSESCPSVSCERPVLRKGQCCPYCIEDTIPKKVVCHFSGKAYADEERWDLDSCTHC 840

Qy     841 YCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP 900
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 YCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP 900

Qy     901 LWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDSIASVVVPIIICLSIIIAFLFI 960
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     901 LWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDSIASVVVPIIICLSIIIAFLFI 960

Qy     961 NQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFYS 1020
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     961 NQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFYS 1020

Qy    1021 MQKQNHLQADNFYQTV 1036
           ||||||||||||||||
Db    1021 MQKQNHLQADNFYQTV 1036


RESULT 5
AAU07141
ID   AAU07141 standard; Protein; 1036 AA.
```

```
XX
AC   AAU07141;
XX
DT   24-OCT-2001  (first entry)
XX
DE   Human CRIM1 protein.
XX
KW   CRIM-1; Human; human chromosome 2p21-16.3; ophthalmological;
KW   neuroprotective; renal; osteopathic; dental; vulnerary; immunogen;
KW   antibody; gene therapy; neurodegenerative disease; eye disorder;
KW   cataract; bone morphogenic protein; BMG; renal disease; bone abnormality;
KW   tooth abnormality; wound; S52.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1..17
FT                   /label= Signal_peptide
FT   Domain          1..901
FT                   /label= Ectodomain
FT                   /note= "This sequence is specifically claimed in claim
FT                   15"
FT   Protein         18..1036
FT                   /label= Mature_CRIM1
FT   Region          200..207
FT                   /note= "Conserved N-terminal motif"
FT   Region          336..391
FT                   /label= CR_1
FT                   /note= "Cysteine rich repeat"
FT   Region          403..456
FT                   /label= CR_2
FT                   /note= "Cysteine rich repeat"
FT   Misc-difference 414
FT                   /note= "Encoded by GAC"
FT   Region          608..662
FT                   /label= CR_3
FT                   /note= "Cysteine rich repeat"
FT   Region          679..734
FT                   /label= CR_4
FT                   /note= "Cysteine rich repeat"
FT   Region          753..808
FT                   /label= CR_5
FT                   /note= "Cysteine rich repeat"
FT   Region          819..873
FT                   /label= CR_6
FT                   /note= "Cysteine rich repeat"
XX
PN   WO200138519-A1.
XX
PD   31-MAY-2001.
XX
PF   24-NOV-2000; 2000WO-AU01435.
XX
PR   26-NOV-1999;   99AU-0004348.
XX
PA   (UYQU ) UNIV QUEENSLAND.
XX
PI   Little M,  Yamada T,  Holmes G,  Georgas K,  Kolle G,  Wilkinson L;
XX
DR   WPI; 2001-343951/36.
DR   N-PSDB; AAS11601.
XX
PT   Nucleic acids from human chromosome 2p21-16.3 and the encoded peptide,
PT   useful for preventing, diagnosing and treating e.g. eye disease,
PT   especially cataract formation -
XX
PS   Claim 11; Fig 1; 169pp; English.
XX
CC   The invention relates to nucleic acids from human chromosome 2p21-16.3
CC   and the encoded peptide (and mouse and chicken orthologues) that
CC   comprises a PGECCPLP group, an insulin-like growth factor binding protein
CC   (IGFBP)-like domain, cysteine-rich domains, an RGD (undefined) group
CC   and a transmembrane domain. The protein, e.g. CRIM1, interacts with
CC   peptides of the transforming growth factor superfamily. A composition
CC   comprising an expression construct comprising the nucleic acids of the
CC   invention or a mimetic which antagonises or mimics an activity of a CRIM1
CC   polypeptide may be used in a method for modulating the biological
CC   activity of a polypeptide of the bone morphogenic protein (BMP) family.
CC   In this way they may be used to prevent or treat an eye disease,
CC   especially cataract formation. They may also be used to treat
CC   neurodegenerative diseases, renal and kidney disease, bone and tooth
CC   abnormalities, wounds and skin damage, e.g. by use of the nucleic acid in
CC   gene therapy by using antibodies directed against CRIM1 polypeptides.
CC   The present sequence represents human CRIM1 (AKA S52).
XX
SQ   Sequence   1036 AA;

  Query Match             99.1%;  Score 5901;  DB 22;  Length 1036;
  Best Local Similarity   99.2%;  Pred. No. 0;
  Matches 1028;  Conservative    3;  Mismatches    5;  Indels    0;  Gaps    0;

Qy       1 MYLVAGDRGLAGCGHLLVSLLGLLLLPARSGTRALVCLPCDESKCEEPRNRPGSIVQGVC 60
           ||||||||||||||||||||||||| |||||||||||||||||||| |||||||||
Db       1 MYLVAGDRGLAGCGHLLVSLLGLLLLLARSGTRALVCLPCDESKCEEPRNCPGSIVQGVC 60

Qy      61 GCCYTCASQGNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120
           ||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GCCYTCASQRNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120

Qy     121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180

Qy     181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240

Qy     241 CCDLYECKPVFGVDCRTVECPTVQQTACPPDSYETQVRLTADGCCTLPTRCECLSGLCGF 300
           |||||||||||||||||||| ||||||||||||||||||||||||||||||||||||||
Db     241 CCDLYECKPVFGVDCRTVECPPVQQTACPPDSYETQVRLTADGCCTLPTRCECLSGLCGF 300

Qy     301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQ 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQ 360

Qy     361 GGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWREDD 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||:||||||
Db     361 GGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGNRWREDD 420

Qy     421 CTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTRK 480
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||| |
Db     421 CTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTGK 480

Qy     481 DCINGFKRDHNGCRTCQCINTQELCSERKQGCTLNCPFGFLTDAQNCEICECRPRPKKCR 540
           ||||||||||||||||||:||||||||||||||||||||||||||||||||||||||||
Db     481 DCINGFKRDHNGCRTCQCINTEELCSERKQGCTLNCPFGFLTDAQNCEICECRPRPKKCR 540

Qy     541 PIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG 600
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 PIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG 600

Qy     601 PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCP 660
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCP 660

Qy     661 SCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 SCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720

Qy     721 QNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWKPDVCTSCICIDS 780
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 QNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWKPDVCTSCICIDS 780

Qy     781 VISCFSESCPSVSCERPVLRKGQCCPYCIKDTIPKKVVCHFSGKAYADEERWDLDSCTHC 840
           |||||||||||||||||||||||||||:||||||||||||||||||||||||||||||
Db     781 VISCFSESCPSVSCERPVLRKGQCCPYCIEDTIPKKVVCHFSGKAYADEERWDLDSCTHC 840
```

```
Qy    841 YCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    841 YCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP 900

Qy    901 LWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDSIASVVVPIIICLSIIIAFLFI 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    901 LWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDSIASVVVPIIICLSIIIAFLFI 960

Qy    961 NQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFYS 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    961 NQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFYS 1020

Qy   1021 MQKQNHLQADNFYQTV 1036
          ||||||||||||||||
Db   1021 MQKQNHLQADNFYQTV 1036
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```
RESULT 6
AAU07142
ID   AAU07142 standard; Protein; 1037 AA.
XX
AC   AAU07142;
XX
DT   24-OCT-2001  (first entry)
XX
DE   Mouse CRIM1 protein.
XX
KW   CRIM-1; Mouse; human chromosome 2p21-16.3; ophthalmological;
KW   neuroprotective; renal; osteopathic; dental; vulnerary; immunogen;
KW   antibody; gene therapy; neurodegenerative disease; eye disorder;
KW   cataract; bone morphogenic protein; BMG; renal disease; bone abnormality;
KW   tooth abnormality; wound; S52.
XX
OS   Mus sp.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1..9
FT                   /label= Signal_peptide
FT   Protein         10..1037
FT                   /label= Mature_CRIM1
FT   Region          200..207
FT                   /note= "Conserved N-terminal motif"
FT   Region          336..391
FT                   /label= CR_1
FT                   /note= "Cysteine rich repeat"
FT   Region          403..456
FT                   /label= CR_2
FT                   /note= "Cysteine rich repeat"
FT   Region          608..662
FT                   /label= CR_3
FT                   /note= "Cysteine rich repeat"
FT   Region          679..734
FT                   /label= CR_4
FT                   /note= "Cysteine rich repeat"
FT   Region          753..808
FT                   /label= CR_5
FT                   /note= "Cysteine rich repeat"
FT   Region          819..873
FT                   /label= CR_6
FT                   /note= "Cysteine rich repeat"
XX
PN   WO200138519-A1.
XX
PD   31-MAY-2001.
XX
PF   24-NOV-2000; 2000WO-AU01435.
XX
PR   26-NOV-1999;   99AU-0004348.
XX
PA   (UYQU ) UNIV QUEENSLAND.
XX
PI   Little M,  Yamada T,  Holmes G,  Georgas K,  Kolle G,  Wilkinson L;
XX
DR   WPI; 2001-343951/36.
DR   N-PSDB; AAS11602.
XX
PT   Nucleic acids from human chromosome 2p21-16.3 and the encoded peptide,
PT   useful for preventing, diagnosing and treating e.g. eye disease,
PT   especially cataract formation -
XX
PS   Claim 11; Fig 1; 169pp; English.
XX
CC   The invention relates to nucleic acids from human chromosome 2p21-16.3
CC   and the encoded peptide (and mouse and chicken orthologues) that
CC   comprises a PGECCPLP group, an insulin-like growth factor binding protein
CC   (IGFBP)-like domain, cysteine-rich domains, an RGD (undefined) group
CC   and a transmembrane domain. The protein, e.g. CRIM1, interacts with
CC   peptides of the transforming growth factor superfamily. A composition
CC   comprising an expression construct comprising the nucleic acids of the
CC   invention or a mimetic which antagonises or mimics an activity of a CRIM1
CC   polypeptide may be used in a method for modulating the biological
CC   activity of a polypeptide of the bone morphogenic protein (BMP) family.
CC   In this way they may be used to prevent or treat an eye disease,
CC   especially cataract formation. They may also be used to treat
CC   neurodegenerative diseases, renal and kidney disease, bone and tooth
CC   abnormalities, wounds and skin damage, e.g. by use of the nucleic acid in
CC   gene therapy by using antibodies directed against CRIM1 polypeptides.
CC   The present sequence represents mouse CRIM1 (AKA S52).
XX
SQ   Sequence   1037 AA;
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  Query Match             90.8%;  Score 5402.5;  DB 22;  Length 1037;
  Best Local Similarity   88.5%;  Pred. No. 6.7e-300;
  Matches  918;  Conservative   51;  Mismatches   67;  Indels    1;  Gaps    1;

Qy      1 MYLVAGDRGLAGCGHLLVSLLGLLLLPARSGTRALVCLPCDESKCEEPRNRPGSIVQGVC 60
          |||||| |||||||| |||||||| |||||||||||||||||||||: |||||||||
Db      1 MYLVAGGRGLAGCGHLSVSLLGLLLLLARSGTRALVCLPCDESKCEEPRSCPGSIVQGVC 60

Qy     61 GCCYTCASQGNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120
          |||| || | |||||| :|::| |||||||||||||||:|||| |||||:| ||||:
Db     61 GCCYMCARQRNESCGGAYGLHGACDRGLRCVIRPPLNGDSITEYEVGVCEDEDWDDDQLI 120

Qy    121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180
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Db    121 GFEPCNENLISGCNIINGKCECGTIRTCNNPFEFPRKDMCLSALKRIEEEKPDCSKARCE 180

Qy    181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240
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Db    181 VRFSPRCPEDSILIEGYAPPGECCPLPSRCVCDPAGCLRKVCQPGYLNILVSKASGKPGE 240

Qy    241 CCDLYECKPVFGVDCRTVECPTVQQTACPPDSYETQVRLTADGCCTLPTRCECLSGLCGF 300
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Db    241 CCDLYECKPVFSVDCSTVECPPVQQAVCPLDSYETQVRLTADGCCTLPARCECLSGLCGF 300

Qy    301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQ 360
          |||||||||||||||||||||||||||:||||||||:|||||||||||||||||||
Db    301 PVCEVGSTPRIVSRGDGTPGKCCDVFECVNETKPACVFNSVEYYDGDMFRMDNCRFCRCQ 360

Qy    361 GGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWREDD 420
          |||:|||||||:|||||||||||||||||:|| |||||||||| | ||||||||||
Db    361 GGVSICFTAQCGELNCERYYVPEGECCPVCEDPIYPLNNPAGCYANGQIRAHGDRWREDD 420

Qy    421 CTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTRK 480
          |||||||||| |||||:|||:| :|||||||||||||| ||:|||||||||:|  |
Db    421 CTFCQCINGEPHCVATACGQSCMHPVKVPGECCPVCEEPTYITIDPPACGELSNCSLKEK 480

Qy    481 DCINGFKRDHNGCRTCQCINTQELCSERKQGCTLNCPFGFLTDAQNCEICECRPRPKKCR 540
          ||: ||| |||||||||||   :|||   |: |||:|||||||  |||:|:|||||||||
Db    481 DCVYGFKLDHNGCRTCQCKIREELCLGLKRACTLDCPFGFLTDVHNCELCQCRPRPKKCR 540

Qy    541 PIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG 600
          | :|||:|||| |||||||||||||||| |||||||||||||||||||   |||
Db    541 PTMCDKFCPLGFLKNKHGCDICRCKKCPELPCSKICPLGFQQDSHGCLICKCREVPPSAG 600
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```
Qy    601 PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCP 660
          ||:|||||::||||||||||||||||||| ||:||||||||||||||||  |||||
Db    601 PPVLSGTCLSMDGHHHKNEESWHDGCRECYCHNGKEMCALITCPVPACGNPTIRSGQCCP 660

Qy    661 SCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720
          || ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    661 SCTDDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLC 720

Qy    721 QNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWKPDVCTSCICIDS 780
          |||||||||||||||| | :|| | | |||:||:|||||||||||||||| ||||:|:||
Db    721 QNPSRTQDSCCPQCTDDPPQPSTSHNESVPSYCRNDEGDIFLAAESWKPDACTSCVCVDS 780

Qy    781 VISCFSESCPSVSCERPVLRKGQCCPYCIKDTIPKKVVCHFSGKAYADEERWDLDSCTHC 840
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Db    781 AISCYSESCPSVACERPVLRKGQCCPYCLEDTIPKKVVCHFSGKTYADEERWDIDSCTHC 840

Qy    841 YCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP 900
          |||||||||||||||||| ||| |||||||||||||||||:|||| |||||:|||||
Db    841 YCLQGQTLCSTVSCPPLPCAEPIKVEGSCCPMCPEMYVPEPTNVPIEKKNHRGEIDLEVP 900

Qy    901 LWPTPSENDIVHLPRDMGHLQVDYRD-NRLHPSEDSSLDSIASVVVPIIICLSIIIAFLF 959
          :|||||||||:|||||||||||||||| ||||| |||||||| ||||||||||||||||
Db    901 MWPTPSENDIIHLPRDMGHLQVDYRDNNRLHPGEDSSLDSIVSVVVPIIICLSIIIAFLL 960

Qy    960 INQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFY 1019
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Db    961 INQKKQWVPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDGPQRMLRIAEPDARFSGFY 1020

Qy   1020 SMQKQNHLQADNFYQTV 1036
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Db   1021 SMQKQNHLQADNFYQTV 1037
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RESULT 7
AAU07143
ID AAU07143 standard; Protein; 1048 AA.
XX
AC AAU07143;
XX
DT 24-OCT-2001 (first entry)
XX
DE Chicken CRIM1 protein.
XX
KW CRIM-1; Chicken; human chromosome 2p21-16.3; ophthalmological;
KW neuroprotective; renal; osteopathic; dental; vulnerary; immunogen;
KW antibody; gene therapy; neurodegenerative disease; eye disorder;
KW cataract; bone morphogenic protein; BMG; renal disease; bone abnormality;
KW tooth abnormality; wound; S52.
XX
OS Gallus gallus.
XX

FH	Key	Location/Qualifiers
FT	Region	212..219
FT		/note= "Conserved N-terminal motif"
FT	Region	348..402
FT		/label= CR_1
FT		/note= "Cysteine rich repeat"
FT	Region	415..468
FT		/label= CR_2
FT		/note= "Cysteine rich repeat"
FT	Region	620..674
FT		/label= CR_3
FT		/note= "Cysteine rich repeat"
FT	Region	691..746
FT		/label= CR_4
FT		/note= "Cysteine rich repeat"
FT	Region	765..820
FT		/label= CR_5
FT		/note= "Cysteine rich repeat"
FT	Region	831..885
FT		/label= CR_6
FT		/note= "Cysteine rich repeat"

XX
PN WO200138519-A1.
XX
PD 31-MAY-2001.
XX
PF 24-NOV-2000; 2000WO-AU01435.
XX
PR 26-NOV-1999; 99AU-0004348.
XX
PA (UYQU) UNIV QUEENSLAND.
XX
PI Little M, Yamada T, Holmes G, Georgas K, Kolle G, Wilkinson L;
XX
DR WPI; 2001-343951/36.
DR N-PSDB; AAS11603.
XX
PT Nucleic acids from human chromosome 2p21-16.3 and the encoded peptide,
PT useful for preventing, diagnosing and treating e.g. eye disease,
PT especially cataract formation -
XX
PS Claim 11; Fig 1; 169pp; English.
XX
CC The invention relates to nucleic acids from human chromosome 2p21-16.3
CC and the encoded peptide (and mouse and chicken orthologues) that
CC comprises a PGECCPLP group, an insulin-like growth factor binding protein
CC (IGFBP)-like domain, cysteine-rich domains, an RGD (undefined) group
CC and a transmembrane domain. The protein, e.g. CRIM1, interacts with
CC peptides of the transforming growth factor superfamily. A composition
CC comprising an expression construct comprising the nucleic acids of the
CC invention or a mimetic which antagonises or mimics an activity of a CRIM1
CC polypeptide may be used in a method for modulating the biological
CC activity of a polypeptide of the bone morphogenic protein (BMP) family.
CC In this way they may be used to prevent or treat an eye disease,
CC especially cataract formation. They may also be used to treat
CC neurodegenerative diseases, renal and kidney disease, bone and tooth
CC abnormalities, wounds and skin damage, e.g. by use of the nucleic acid in
CC gene therapy by using antibodies directed against CRIM1 polypeptides.
CC The present sequence represents chicken CRIM1 (AKA S52).
XX
SQ Sequence 1048 AA;

Query Match 83.5%; Score 4969; DB 22; Length 1048;
Best Local Similarity 80.6%; Pred. No. 3.4e-275;
Matches 846; Conservative 80; Mismatches 109; Indels 14; Gaps 5;

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Qy      1 MYLVA---------GDRGLAGCG-HLLVS--LLGLLLLPARSGTRALVCLPCDESKCEEP 48
            ||| |         || |  | | ||  :  || | ||  : |||||||||||||||||
Db      1 MYLAAVSAGRRRPGGDGGGGGGGWHLAAAGWLLLLALLLGQPGTRALVCLPCDESKCEEP 60

Qy     49 RNRPGSIVQGVCGCCYTCASQGNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGV 108
          :: || || |:|||: || | |||||| :|::| |||||||||||||||:|||| ||
Db     61 KSCPGIIVLGICGCCFMCARQRNESCGGVYGLHGACDRGLRCVIRPPLNGDSITEYEVGV 120

Qy    109 CEDENWTDDQLLGFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIE 168
          |||||| |||||||:||||||| |||||||||:|:|||||:|||||||:| |||||||||
Db    121 CEDENWDDDQLLGFEPCNENLITGCNIINGKCDCDTIRTCNNPFEFPSRDTCLSALKRIE 180

Qy    169 EEKPDCSKARCEVQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLN 228
          |||||||||||||||||||||||:|||||||||||||||||||||||||||||||||| ||
Db    181 EEKPDCSKARCEVQFSPRCPEDSILIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGYLN 240

Qy    229 ILVSKASGKPGECCDLYECKPVFGVDCRTVECPTVQQTACPPDSYETQVRLTADGCCTLP 288
          |||||||||||||||||||||| ||| ||||| ||| || ||||||||||||||||||
Db    241 ILVSKASGKPGECCDLYECKPVFSVDCSTVECPPVQQVVCPLDSYETQVRLTADGCCTLP 300

Qy    289 TRCECLSGLCGFPVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDM 348
          |||||||||||||:|| || |:|||||||||||||||||||: || |:||::|||||||
Db    301 TRCECLSGLCGFPMCEAGSVPQIVSRGDGTPGKCCDVFECVNEVKPTCIFNSMEYYDGDM 360

Qy    349 FRMDNCRFCRCQGGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGL 408
          |||| |||||||||:|||:|||||::|:|||||||||||||||||| ||||||||||
Db    361 FRMDACRFCRCQGGVSICFSAQCGELHCDRYYVPEGECCPVCEDPVYPVNNPAGCYANGQ 420

Qy    409 ILAHGDRWREDDCTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPA 468
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Db    421 IQAHGDRWREDDCTFCQCINGNPHCVATACGQSCLNPVKVPGECCPVCEEPTYITIGPPT 480

Qy    469 CGELSNCTLTRKDCINGFKRDHNGCRTCQCINTQELCSERKQGCTLNCPFGFLTDAQNCE 528

Db    481 CELLVNCTLTEKDCIYSFKLDQNGCRICQCKTREELCTGLISGCSLDCSFGFQTDAHNCE 540

Qy    529 ICECRPRPKKCRPIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCL 588

Db    541 ICQCRPRPKKCKPIVCDKYCPFGYLKNKHGCEICRCKKCPEMPCGKICPMGFQQNSHGCV 600

Qy    589 ICKCREASASAGPPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPAC 648

Db    601 ICKCREATASLMPPVKTGSCLSMDGRRHENEESWHDGCRECYCHNGREMCALITCPVPNC 660

Qy    649 GNPTIHPGQCCPSCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRV 708

Db    661 GNPTIHPGQCCPSCPDEIIVQKPELTSPSICHAPGGEYFVEGETWNIDSCTQCTCHSGRV 720

Qy    709 LCETEVCPPLLCQNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFLAAESWK 768

Db    721 LCETEVCPPLLCQNPTRTQDSCCPQCPDEPLQPSLSSNVSMPSYCKNDEGDIFLTAESWK 780

Qy    769 PDVCTSCICIDSVISCFSESCPSVSCERPVLRKGQCCPYCIKDTIPKKVVCHFSGKAYAD 828

Db    781 PNVCTSCICMDGVIRCYSESCPPVSCERPVLRKGQCCPYCIEDTVPKKVVCHFNGKTYAD 840

Qy    829 EERWDLDSCTHCYCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEK 888

Db    841 EERWDIDSCTHCYCLQGQTLCSTVSCPPLPCAEPINVEGSCCPMCPEMYVPEPTNIPIEK 900

Qy    889 TNHRGEVDLEVPLWPTPSENDIVHLPRDMGHLQVDYRD-NRLHPSEDSSLDSIASVVVPI 947

Db    901 TNHRGDVELEVPNWSTPSENDIIHIHRDMNHLQGEYRSGNGPHPSEDASVSSVALVTVPI 960

Qy    948 IICLSIIIAFLFINQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLR 1007

Db    961 TIALLVIIVFLLINQKKQWIPVSC-YKAPTKPSCLNNQLVYVDCKKGTMVQVDSSQRMLR 1019

Qy   1008 IAEPDARFSGFYSMQKQNHLQADNFYQTV 1036

Db   1020 IADPDSRYSGFYSMQKQNNLQADNFYQTV 1048
```

```
RESULT 8
AAB61140
ID   AAB61140 standard; Protein; 732 AA.
XX
AC   AAB61140;
XX
DT   30-MAR-2001  (first entry)
XX
DE   Human NOV10 protein.
XX
KW   Human; NOVX; antiinflammatory; cytostatic; neuroprotective;
KW   cerebroprotective; immunomodulator; vulnerary; vasotropic; gene therapy;
KW   hyperplasia; tumour; restenosis; psoriasis; Dupuytren's contracture;
KW   diabetes; rheumatoid arthritis; cerebral oedema; Alzheimer's disease.
XX
OS   Homo sapiens.
XX
PN   WO200075321-A2.
XX
PD   14-DEC-2000.
XX
PF   01-JUN-2000; 2000WO-US15303.
XX
PR   03-JUN-1999;   99US-0137322.
PR   16-MAR-2000; 2000US-0189810.
PR   22-MAR-2000; 2000US-0191158.
PR   30-MAR-2000; 2000US-0193086.
PR   31-MAY-2000; 2000US-0137322.
XX
PA   (CURA-) CURAGEN CORP.
XX
PI   Shimkets RA,  Fernandes E,  Herrman J,  Vernet C;
XX
DR   WPI; 2001-102403/11.
DR   N-PSDB; AAF27858.
XX
PT   New NOVX polypeptides and polynucleotides, useful in gene therapy, as a
PT   diagnostic marker, protein therapeutic, antibody or small molecule drug
PT   target for treating immune, proliferative and metabolic diseases and
PT   wound healing  -
XX
PS   Claim 1; Page 39-42; 194pp; English.
XX
CC   The present sequence is a new isolated polypeptide (NOVX). The NOVX
CC   polypeptides, NOVX nucleic acids, and anti-NOVX antibodies are useful for
CC   treating or preventing NOVX-associated disorders. They are also useful
CC   for determining the presence of or a predisposition to a disease
CC   associated with altered levels of the NOVX polypeptide or nucleic acid.
CC   These NOVX-associated disorders include hyperplasias, tumours,
CC   restenosis, psoriasis, Dupuytren's contracture, diabetic complications,
CC   rheumatoid arthritis, cerebral lesions, diabetic neuropathies, cerebral
CC   oedema, senile dementia or Alzheimer's disease. The NOVX polynucleotides
CC   are especially useful in gene therapy. Specifically, NOVX is useful as
CC   a diagnostic marker or prognostic marker, protein therapeutic and
CC   antibody target or small molecule drug target to treat disorders in the
CC   immune response pathway, thyroid and metabolic diseases, bone metabolic
CC   disorders, diseases of the pancreas (e.g. diabetes or digestive
CC   disorders), proliferative diseases, or tissue regeneration and
CC   development (e.g. wound healing or treatment of burns).
XX
SQ   Sequence   732 AA;
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Query Match 70.0%; Score 4167; DB 22; Length 732;
Best Local Similarity 98.6%; Pred. No. 1.2e-229;
Matches 711; Conservative 3; Mismatches 7; Indels 0; Gaps 0;

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Qy    159 MCLSALKRIEEEKPDCSKARCEVQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCL 218

Db      1 MCLSALKRIEEEKPDCSKARCEVQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCL 60

Qy    219 RKVCQPGNLNILVSKASGKPGECCDLYECKPVFGVDCRTVECPTVQQTACPPDSYETQVR 278

Db     61 RKVCQPGNLNILVSKASGKPGECCDLYECKPVFGVDCRTVECPPVQQTACPPDSYETQVR 120

Qy    279 LTADGCCTLPTRCECLSGLCGFPVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVF 338

Db    121 LTADGCCTLPTRCECLSGLCGFPVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVF 180

Qy    339 NNVEYYDGDMFRMDNCRFCRCQGGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFN 398

Db    181 NNVEYYDGDMFRMDNCRFCRCQGGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFN 240

Qy    399 NPAGCYANGLILAHGDRWREDDCTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEE 458

Db    241 NPAGCYANGLILAHGDRWREDDCTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEE 300

Qy    459 PTIITVDPPACGELSNCTLTRKDCINGFKRDHNGCRTCQCINTQELCSERKQGCTLNCPF 518

Db    301 PTIITVDPPACGELSNCTLTGKDCINGFKRDHNGCRTCQCINTEELCSERKQGCTLNCPF 360

Qy    519 GFLTDAQNCEICECRPRPKKCRPIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPL 578

Db    361 GFLTDAQNCEICECRPRPKKCRPIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPL 420

Qy    579 GFQQDSHGCLICKCREASASAGPPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMC 638

Db    421 GFQQDSRGCLICKCREASASAGPPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMC 480

Qy    639 ALITCPVPACGNPTIHPGQCCPSCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSC 698

Db    481 ALITCPVPACGNPTIHPGQCCPSCADDFVVQKPELSTPSICHAPGGEYFVEGETWNIDSC 540
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Qy    699 TQCTCHSGRVLCETEVCPPLLCQNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEG 758
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541 TQCTCHSGRVLCETEVCPPLLCQNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEG 600

Qy    759 DIFLAAESWKPDVCTSCICIDSVISCFSESCPSVSCERPVLRKGQCCPYCIKDTIPKKVV 818
          ||||||||||||||||||||||||||||||||||||||||||||||||||:|||||||||
Db    601 DIFLAAESWKPDVCTSCICIDSVISCFSESCPSVSCERPVLRKGQCCPYCIEDTIPKKVV 660

Qy    819 CHFSGKAYADEERWDLDSCTHCYCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYV 878
          |||||||||||||||||| |||||||||||||||||||||||||||||||||    :
Db    661 CHFSGKAYADEERWDLDSCTHYYCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPVSPL 720

Qy    879 P 879
          |
Db    721 P 721
```

RESULT 9
ABG66681
ID ABG66681 standard; Protein; 503 AA.
XX
AC ABG66681;
XX
DT 30-AUG-2002 (first entry)
XX
DE Human novel polypeptide #16.
XX
KW Human; inflammatory condition; shock; sepsis; immune response;
KW cancer; wound healing; central nervous system disease; haematopoiesis;
KW peripheral nervous system disease; amyotrophic lateral sclerosis; tendon;
KW myeloid cell disorder; lymphoid cell disorder; platelet disorder; bone;
KW cartilage; ligament; nerve tissue; ulcer; osteoporosis; osteoarthritis;
KW bone degenerative disorder; periodontal disease; reperfusion injury;
KW lung fibrosis; liver fibrosis; autoimmune disorder; bacterial infection;
KW allergic condition; thrombolysis; thrombosis; coagulation disorder;
KW fungal infection.
XX
OS Homo sapiens.
XX
PN WO200244340-A2.
XX
PD 06-JUN-2002.
XX
PF 30-NOV-2001; 2001WO-US47004.
XX
PR 30-NOV-2000; 2000US-0028952.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Tang YT, Goodrich RW, Liu C, Zhou P, Asundi V, Wang J, Wang D;
PI Yamazaki V, Ujwal ML, Drmanac RT;
XX
DR WPI; 2002-508509/54.
DR N-PSDB; ABK94905.
XX
PT Novel nucleic acids and polypeptides for diagnosis, treatment of
PT inflammatory, autoimmune, nervous system, myeloid or lymphoid cell
PT disorders, cancer and promoting wound healing -
XX
PS Claim 10; Page 580-581; 672pp; English.
XX
CC The invention relates to human novel polynucleotides and associated
CC polypeptides. The polynucleotides and polypeptides are useful for
CC treating inflammatory conditions such as arthritis, nephritis, Crohn's
CC disease, ischaemia-reperfusion injury, shock, sepsis, immune responses
CC and cancer and for promoting wound healing. The sequences are used to
CC induce the proliferation of neural cells and regeneration of nerve and
CC brain tissue, and are useful for the treatment of central and peripheral
CC nervous system diseases and neuropathies, such as Alzheimer's disease,
CC Parkinson's disease, Huntington's disease and amyotrophic lateral
CC sclerosis. The sequences are involved in chemotactic or chemokinetic
CC activity, regulation of haematopoiesis, treatment of myeloid or lymphoid
CC cell disorders and platelet disorders such as thrombocytopenia,
CC regeneration of bone, cartilage, tendon, ligament and/or nerve tissue
CC growth, tissue repair, healing of burns, incisions, ulcers, treatment of
CC osteoporosis, osteoarthritis, bone degenerative disorders and periodontal
CC disease. The sequences of the invention are also useful for gut
CC protection or regeneration and treatment of lung or liver fibrosis,
CC reperfusion injury in various tissues, immune deficiencies and disorders
CC including severe combined immunodeficiency (SCID), bacterial or fungal
CC infections, autoimmune disorders e.g. multiple sclerosis and myasthenia
CC gravis, allergic conditions such as asthma, thrombolysis or thrombosis
CC and coagulation disorders. Sequences ABG66666-ABG66758 represent human
CC novel polypeptides of the invention.
XX
SQ Sequence 503 AA;

Query Match 47.5%; Score 2828.5; DB 23; Length 503;
Best Local Similarity 98.0%; Pred. No. 1.5e-153;
Matches 493; Conservative 2; Mismatches 7; Indels 1; Gaps 1;

```
Qy      1 MYLVAGDRGLAGCGHLLVSLLGLLLLPARSGTRALVCLPCDESKCEEPRNRPGSIVQGVC 60
          |||||||||||||||||||||||||| |||||||||||||||||||| |||||||||
Db      1 MYLVAGDRGLAGCGHLLVSLLGLLLLLARSGTRALVCLPCDESKCEEPRNCPGSIVQGVC 60

Qy     61 GCCYTCASQGNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120
          |||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 GCCYTCASQRNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLL 120

Qy    121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 GFKPCNENLIAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCE 180

Qy    181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 VQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPGNLNILVSKASGKPGE 240

Qy    241 CCDLYECKPVFGVDCRTVECPTVQQTA-CPPDSYETQVRLTADGCCTLPTRCECLSGLCG 299
          |||||||||||||||||||| ||||| |||||||||||||||| || ||||||||||
Db    241 CCDLYECKPVFGVDCRTVECPPVQQTARCPPDSYETQVRLTADGCCPLPPRCECLSGLCG 300

Qy    300 FPVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRC 359
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 FPVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRC 360

Qy    360 QGGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWRED 419
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 QGGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWRED 420

Qy    420 DCTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTR 479
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 DCTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSNCTLTG 480

Qy    480 KDCINGFKRDHNGCRTCQCINTQ 502
          |||||||||||||||||||::
Db    481 KDCINGFKRDHNGCRTCQCINSE 503
```

RESULT 10
AAY82775
ID AAY82775 standard; Protein; 400 AA.
XX
AC AAY82775;
XX
DT 19-JUN-2000 (first entry)
XX
DE Human chordin related protein (Clone dj167_2).
XX
KW Chordin related protein; cartilage; bone; connective tissue;
KW periodontal disease; osteoporosis; burn; incision; ulcer; neuron;
KW astrocyte; glial cell; transplantation; nerve; epidermis; muscle;
KW liver; brain; lung; cardiac; pancreas; kidney; growth;
KW differentiation; TGF-Beta; angiogenesis; chemotaxis;
KW chemoattraction; collagen synthesis; fibrosis; cell adhesion;
KW cell migration; fertility; reproduction; haematopoiesis;
KW erythroid cell; tumour; dietary supplement; growth medium.

XX
OS Homo sapiens.
XX
PN WO200009551-A1.
XX
PD 24-FEB-2000.
XX
PF 10-AUG-1999; 99WO-US18117.
XX
PR 10-AUG-1998; 98US-0095880.
PR 06-MAY-1999; 99US-0306111.
XX
PA (GEMY) GENETICS INST INC.
XX
PI Jacobs K, Mccoy JM, Lavallie ER, Collins-racie LA, Merberg D;
PI Treacy M, Diblasio-smith E, Widom A;
XX
DR WPI; 2000-205978/18.
DR N-PSDB; AAZ93171.
XX
PT New polynucleotides encoding secreted human proteins, useful for
PT treating e.g. broken bones, craniofacial defects, peridontal disease,
PT osteoporosis, burns, incisions or ulcers -
XX
PS Claim 10; Page 92-93; 105pp; English.
XX
CC The human chordin related protein and polynucleotides encoding them
CC are predicted to have biological activities which would make them
CC suitable for treating, preventing or ameliorating medical conditions
CC which involve defects in cartilage, bone or connective tissue
CC formation and damage to cartilage, bone or connective tissue, e.g.
CC broken bones, congenital, trauma-induced, or
CC oncologic-resection-induced craniofacial defects, periodontal
CC disease, defects in the periodontal ligament or attachment apparatus,
CC damage to the periodontal ligament or attachment apparatus,
CC osteoporosis, burns, incisions or ulcers. The proteins may also
CC affect neuronal, astrocytic, and glial cell survival and therefore be
CC useful in transplantation and treatment of conditions exhibiting a
CC decrease in neuronal survival and repair. The proteins may also be
CC useful for the treatment of conditions related to other types of
CC tissue, such as nerve, epidermis, muscle, and other organs such as
CC liver, brain, lung, cardiac, pancreas, and kidney tissue. The
CC proteins may further be useful for the treatment of relatively
CC undifferentiated cell populations, such as embryonic cells, or stem
CC cells, to enhance growth and/or differentiation of the cells.
CC The proteins may also have other useful properties characteristic of
CC the TGF-beta superfamily of proteins. Such properties include
CC angiogenic, chemotactic, and/or chemoattractant properties, and
CC effects on cells including induction or inhibition of collagen
CC synthesis, fibrosis, differentiation responses, cell proliferative
CC responses, and responses involving cell adhesion, migration, and
CC extracellular matrices. These properties make the proteins potential
CC agents for wound healing, reduction of fibrosis, and reduction of
CC scar tissue formation. Chordin-related proteins may also be useful
CC for advancement of the onset of fertility in sexually immature
CC mammals, so as to increase the lifetime reproductive performance of
CC domestic animals such as cows, sheep and pigs. Chordin-related
CC proteins may also be useful in modulating hematopoiesis by inducing
CC the differentiation of erythroid cells, for suppressing the
CC development of gonadal tumors, or for augmenting the activity of
CC BMPs. The proteins may also have value as a dietary supplement, or
CC as a component of cell culture media.
XX
SQ Sequence 400 AA;

Query Match 37.9%; Score 2254; DB 21; Length 400;
Best Local Similarity 99.8%; Pred. No. 6.6e-121;
Matches 399; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```
Qy    637 MCALITCPVPACGNPTIHPGQCCPSCADDFVVQKPELSTPSICHAPGGEYFVEGETWNID 696
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 MCALITCPVPACGNPTIHPGQCCPSCADDFVVQKPELSTPSICHAPGGEYFVEGETWNID 60

Qy    697 SCTQCTCHSGRVLCETEVCPPLLCQNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKND 756
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 SCTQCTCHSGRVLCETEVCPPLLCQNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKND 120

Qy    757 EGDIFLAAESWKPDVCTSCICIDSVISCFSESCPSVSCERPVLRKGQCCPYCIKDTIPKK 816
          ||||||||||||||||||||||||||||||||||||||||||||||||||:||||||||||
Db    121 EGDIFLAAESWKPDVCTSCICIDSVISCFSESCPSVSCERPVLRKGQCCPYCIEDTIPKK 180

Qy    817 VVCHFSGKAYADEERWDLDSCTHCYCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEM 876
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 VVCHFSGKAYADEERWDLDSCTHCYCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEM 240

Qy    877 YVPEPTNIPIEKTNHRGEVDLEVPLWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSS 936
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 YVPEPTNIPIEKTNHRGEVDLEVPLWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSS 300

Qy    937 LDSIASVVVPIIICLSIIIAFLFINQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTR 996
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 LDSIASVVVPIIICLSIIIAFLFINQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTR 360

Qy    997 VQVDSSQRMLRIAEPDARFSGFYSMQKQNHLQADNFYQTV 1036
          ||||||||||||||||||||||||||||||||||||||||
Db    361 VQVDSSQRMLRIAEPDARFSGFYSMQKQNHLQADNFYQTV 400
```

RESULT 11
AAY53033
ID AAY53033 standard; Protein; 400 AA.
XX
AC AAY53033;
XX
DT 29-FEB-2000 (first entry)
XX
DE Human secreted protein clone dj167_2 protein sequence SEQ ID NO:72.
XX
KW Human; secreted protein; nutritional; cytokine; cell proliferation;
KW differentiation; immune stimulating; vaccine; suppression;
KW haematopoiesis regulation; tissue growth; activin; inhibin;
KW chemotactic; chemokinetic; haemostatic; thrombolytic; receptor;
KW ligand; anti-inflammatory; cadherin; tumour invasion suppressor;
KW tumour inhibition; gene therapy.
XX
OS Homo sapiens.
XX
PN WO9957132-A1.
XX
PD 11-NOV-1999.
XX
PF 07-MAY-1999; 99WO-US09970.
XX
PR 07-MAY-1998; 98US-0084564.
PR 02-JUN-1998; 98US-0087645.
PR 22-JUL-1998; 98US-0093712.
PR 31-JUL-1998; 98US-0094935.
PR 10-AUG-1998; 98US-0095880.
PR 11-AUG-1998; 98US-0096068.
PR 06-MAY-1999; 99US-0096068.
XX
PA (GEMY) GENETICS INST INC.
XX
PI Jacobs K, McCoy JM, LaVallie ER, Collins-Racie LA, Evans C;
PI Merberg D, Treacy M, Agostino MJ, Steininger RJ, Bowman MR;
PI DiBlasio-Smith E, Widom A;
XX
DR WPI; 2000-052937/04.
DR N-PSDB; AAZ33351.
XX
PT New polynucleotides encoding secreted human proteins, derived from
PT adult placenta, adult retina, fetal brain, fetal -
XX
PS Claim 81; Page 423-424; 492pp; English.
XX
CC The present invention describes new human secreted proteins which were

```
CC   isolated from adult placenta, adult retina, foetal brain, foetal kidney,
CC   adult blood, adult brain, adult thyroid, adult bladder, adult neural
CC   tissue, adult testes, and adult lymph node cDNA libraries. The human
CC   secreted proteins, and the polynucleotides encoding them, are predicted
CC   to have biological activities which would make them suitable for
CC   treating, preventing or ameliorating medical conditions in humans and
CC   animals. Suggested activities include nutritional activity, cytokine
CC   and cell proliferation/differentiation activity, immune stimulating
CC   (e.g. as vaccines) or suppressing activity, haematopoiesis regulating
CC   activity, tissue growth activity, activin/inhibin activity,
CC   chemotactic/chemokinetic activity, haemostatic and thrombolytic
CC   activity, receptor/ligand activity, anti-inflammatory activity,
CC   cadherin/tumour invasion suppressor activity, and tumour inhibition
CC   activity. The polynucleotides are also stated to be useful for gene
CC   therapy. AAZ33316 to AAZ33373 encode human secreted proteins, and
CC   AAY52998 to AAY53060 represent human secreted proteins, given in the
CC   present invention.
XX
SQ   Sequence   400 AA;

  Query Match            37.9%;  Score 2254;  DB 21;  Length 400;
  Best Local Similarity   99.8%;  Pred. No. 6.6e-121;
  Matches  399;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy     637 MCALITCPVPACGNPTIHPGQCCPSCADDFVVQKPELSTPSICHAPGGEYFVEGETWNID 696
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MCALITCPVPACGNPTIHPGQCCPSCADDFVVQKPELSTPSICHAPGGEYFVEGETWNID 60

Qy     697 SCTQCTCHSGRVLCETEVCPPLLCQNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKND 756
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 SCTQCTCHSGRVLCETEVCPPLLCQNPSRTQDSCCPQCTDQPFRPSLSRNNSVPNYCKND 120

Qy     757 EGDIFLAAESWKPDVCTSCICIDSVISCFSESCPSVSCERPVLRKGQCCPYCIKDTIPKK 816
           ||||||||||||||||||||||||||||||||||||||||||||||||||||:||||||
Db     121 EGDIFLAAESWKPDVCTSCICIDSVISCFSESCPSVSCERPVLRKGQCCPYCIEDTIPKK 180

Qy     817 VVCHFSGKAYADEERWDLDSCTHCYCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEM 876
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 VVCHFSGKAYADEERWDLDSCTHCYCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEM 240

Qy     877 YVPEPTNIPIEKTNHRGEVDLEVPLWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSS 936
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 YVPEPTNIPIEKTNHRGEVDLEVPLWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSS 300

Qy     937 LDSIASVVVPIIICLSIIIAFLFINQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTR 996
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 LDSIASVVVPIIICLSIIIAFLFINQKKQWIPLLCWYRTPTKPSSLNNQLVSVDCKKGTR 360

Qy     997 VQVDSSQRMLRIAEPDARFSGFYSMQKQNHLQADNFYQTV 1036
           |||||||||||||||||||||||||||||||||||||||||
Db     361 VQVDSSQRMLRIAEPDARFSGFYSMQKQNHLQADNFYQTV 400


RESULT 12
AAB40954
ID   AAB40954 standard; Protein; 322 AA.
XX
AC   AAB40954;
XX
DT   08-FEB-2001  (first entry)
XX
DE   Human ORFX ORF718 polypeptide sequence SEQ ID NO:1436.
XX
KW   Human; open reading frame; ORFX; detection; cytostatic; hepatotropic;
KW   vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
KW   anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant;
KW   immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
KW   hypotensive; dermatological; immunosuppressive; antiinflammatory;
KW   antiviral; antibacterial; antifungal; antirheumatic; antithyroid;
KW   antianaemic; gene therapy; cancer; proliferative disorder; hypertension;
KW   neurodegenerative disorder; osteoarthritis; graft vs host disease;
KW   cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS;
KW   cholesterol ester storage; systemic lupus erythematosus; infection;
KW   severe combined immunodeficiency; malaria; autoimmune disorder; asthma;
KW   allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound;
KW   bone damage; cartilage damage; antiinflammatory disease; coagulation;
KW   thrombosis; contraceptive.
XX
OS   Homo sapiens.
XX
PN   WO200058473-A2.
XX
PD   05-OCT-2000.
XX
PF   31-MAR-2000; 2000WO-US08621.
XX
PR   31-MAR-1999;   99US-0127607.
PR   02-APR-1999;   99US-0127636.
PR   05-APR-1999;   99US-0127728.
PR   30-MAR-2000; 2000US-0540763.
XX
PA   (CURA-) CURAGEN CORP.
XX
PI   Shimkets RA,  Leach M;
XX
DR   WPI; 2000-602362/57.
DR   N-PSDB; AAC75163.
XX
PT   Novel nucleic acids and peptides derived from open reading frame X,
PT   useful for treating e.g. cancers, proliferative disorders,
PT   neurodegenerative disorders and cardiovascular disease -
XX
PS   Claim 11; Page 1214-1215; 5507pp; English.
XX
CC   AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397,
CC   which represent the human ORFX open reading frames 1 to 3161. The ORFX
CC   sequences have activities such as: cytostatic; hepatotropic; vulnerary;
CC   antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
CC   osteopathic; anticonvulsant; antiarthritic; immunosuppressant;
CC   immunostimulant; cardiant; thrombolytic; coagulant; vasotropic;
CC   antidiabetic; hypotensive; dermatological; immunosuppressive;
CC   antiinflammatory; antibacterial; antiviral; antifungal; antirheumatic;
CC   antithyroid; and antianaemic. The sequences can be used for determining
CC   the presence of or predisposition to, or preventing or treating
CC   pathological conditions associated with an ORFX-associated disorder. The
CC   nucleic acids can be used to express ORFX proteins in gene therapy
CC   vectors. The proteins and nucleic acids may be used to treat cancers,
CC   proliferative disorders, neurodegenerative disorders, osteoarthritis,
CC   graft vs host disease, cardiovascular disease, diabetes mellitus,
CC   hypertension, hypothyroidism, cholesterol ester storage, systemic lupus
CC   erythematosus, severe combined immunodeficiency (SCID), AIDS, viral,
CC   bacterial or fungal infection, malaria, autoimmune disorders, asthma,
CC   allergies, aplastic anaemia, burns, wounds, bone and cartilage damage,
CC   nocturnal haemoglobinuria, antiinflammatory disease; to enhance
CC   coagulation; to inhibit thrombosis; and as a contraceptive.
XX
SQ   Sequence   322 AA;

  Query Match            26.5%;  Score 1575;  DB 21;  Length 322;
  Best Local Similarity   83.0%;  Pred. No. 2.6e-82;
  Matches  279;  Conservative    3;  Mismatches   28;  Indels   26;  Gaps    4;

Qy     295 SGLCGFPVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNC 354
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2 SGLCGFPVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNC 61

Qy     355 RFCRCQGGVAICFTAQCGEINCERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGD 414
           |||||||||||||||||||||||||||||||||||        |    |||||||||
Db      62 RFCRCQGGVAICFTAQCGEINCERYYVPEGECCPVCEIQCILLIIPLAA-ANGLILAHGD 120

Qy     415 RWREDDCTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSN 474
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 RWREDDCTFCQCVNGERHCVATVCGQTCTNPVKVPGECCPVCEEPTIITVDPPACGELSN 180

Qy     475 CTLTRKDCINGFKRDHNGCRTCQCINTQELCSERKQGCTLNCPFGFLTDAQNCEICECRP 534
           |||| ||||||||||||||||||||:||||||||||||||||||||||||||||||||||
```

```
Db    181 CTLTGKDCINGFKRDHNGCRTCQCINTEELCSERKQGCTLNCPFGFLTDAQNCEICECRP 240

Qy    535 RPKKCRPIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCRE 594
          ||||||||||||||||||||||||||||||||||||||||  ||||
Db    241 RPKKCRPIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKXLPLGF---------------- 286

Qy    595 ASASAGPPILS------GTCLTVDGH--HHKNEESW 622
              ||   ||      | | :   |   | :   |
Db    287 ---PAGQSRLSYLQVQRGLCFSWATHPVGHLSHRGW 319


RESULT 13
AAU07149
ID   AAU07149 standard; Protein; 872 AA.
XX
AC   AAU07149;
XX
DT   24-OCT-2001  (first entry)
XX
DE   C. elegans CRIM1 protein.
XX
KW   CRIM-1; human chromosome 2p21-16.3; ophthalmological;
KW   neuroprotective; renal; osteopathic; dental; vulnerary; immunogen;
KW   antibody; gene therapy; neurodegenerative disease; eye disorder;
KW   cataract; bone morphogenic protein; BMG; renal disease; bone abnormality;
KW   tooth abnormality; wound; S52.
XX
OS   Caenorhabditis elegans.
XX
FH   Key             Location/Qualifiers
FT   Region          31..38
FT                   /note= "Conserved N-terminal motif"
FT   Region          172..228
FT                   /label= CR_1
FT                   /note= "Cysteine rich repeat"
FT   Region          231..285
FT                   /label= CR_2
FT                   /note= "Cysteine rich repeat"
FT   Region          424..469
FT                   /label= CR_3
FT                   /note= "Cysteine rich repeat"
FT   Region          509..566
FT                   /label= CR_4
FT                   /note= "Cysteine rich repeat"
FT   Region          584..635
FT                   /label= CR_5
FT                   /note= "Cysteine rich repeat"
FT   Region          645..698
FT                   /label= CR_6
FT                   /note= "Cysteine rich repeat"
XX
PN   WO200138519-A1.
XX
PD   31-MAY-2001.
XX
PF   24-NOV-2000; 2000WO-AU01435.
XX
PR   26-NOV-1999;   99AU-0004348.
XX
PA   (UYQU ) UNIV QUEENSLAND.
XX
PI   Little M,  Yamada T,  Holmes G,  Georgas K,  Kolle G,  Wilkinson L;
XX
DR   WPI; 2001-343951/36.
XX
PT   Nucleic acids from human chromosome 2p21-16.3 and the encoded peptide,
PT   useful for preventing, diagnosing and treating e.g. eye disease,
PT   especially cataract formation -
XX
PS   Example 14; Fig 4; 169pp; English.
XX
CC   The invention relates to nucleic acids from human chromosome 2p21-16.3
CC   and the encoded peptide (and mouse and chicken orthologues) that
CC   comprises a PGECCPLP group, an insulin-like growth factor binding protein
CC   (IGFBP)-like domain, cysteine-rich domains, an RGD (undefined) group
CC   and a transmembrane domain. The protein, e.g. CRIM1, interacts with
CC   peptides of the transforming growth factor superfamily. A composition
CC   comprising an expression construct comprising the nucleic acids of the
CC   invention or a mimetic which antagonises or mimics an activity of a CRIM1
CC   polypeptide may be used in a method for modulating the biological
CC   activity of a polypeptide of the bone morphogenic protein (BMP) family.
CC   In this way they may be used to prevent or treat an eye disease,
CC   especially cataract formation. They may also be used to treat
CC   neurodegenerative diseases, renal and kidney disease, bone and tooth
CC   abnormalities, wounds and skin damage, e.g. by use of the nucleic acid in
CC   gene therapy by using antibodies directed against CRIM1 polypeptides.
CC   The present sequence represents C. elegans CRIM1 (AKA S52).
XX
SQ   Sequence   872 AA;

  Query Match             22.0%;  Score 1307;  DB 22;  Length 872;
  Best Local Similarity   32.9%;  Pred. No. 1.3e-66;
  Matches  280;  Conservative  112;  Mismatches  306;  Indels  154;  Gaps   36;

Qy    173 DCSKARCEVQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKV--CQPGNLNIL 230
          || || | : |   || || ||     || ||| |  | |:   |:  |  |      ::
Db      4 DCLKAICPLVFHKGCPSDSQLITVSPAPGNCCPPPGSCHCDQKKCVPSVPTCTKEERLVM 63

Qy    231 VSKASGKPGECCDLYECKPVFGVDCRTVECPTV--QQTACPPDSYETQVRLTADGCCTLP 288
          | | |  ||:||  |||       |  | || :   :  |||||      :: : || :
Db     64 VEKGSDIPGKCCAYYECHKK-EKKCENVHCPPMFQDEEECPPDSIRPPESISKESCCPIR 122

Qy    289 TRCECLSGLCGFPVCEVGSTPRIVSRGDGTPGKCCDVFECVND--TKPACVFNNVEYYDG 346
            |:|   :|    |  |    :  :| | ||:||| :|||:   :|  |  : :|
Db    123 QSCKCRGSICRPAQCPDGKVVNVTKKGTGFPGRCCDKWECVDAELSKAKCNHSGIERQPL 182

Qy    347 DMFRMDNCRFCRCQGGVAICFTAQCGEIN--CERYYVPEGECCPVCEDPVYPFNNPAGCY 404
          : : : :|  |:|  ||::|    | ::|  |    :| |||||||           ||
Db    183 ETWHVSDCESCQCIRGVSVCNKMTCPKVNQECTWIGIPTGECCPVC----------LGCT 232

Qy    405 ANGLILAHGDRWREDDCTFCQCVN-GERHCVATVCGQTCTNPVKVPGECCPVCEEPTIIT 463
          |   |  |  |::|||| | |   |   |   :|   | || || |:|||||:|||||
Db    233 DNQTKLERGATWQKDDCTSCTCSELGAHMCEKYMCKTDCENPRKVEGQCCPVCDEPTIIR 292

Qy    464 VDPPA-CGELSNCTLTRKDCINGFKRDHNGCRTCQCINTQELCSERKQGCTLNCPFGFLT 522
            ||| |  |  |:|    | || :||: ||  |:|:  :
Db    293 --PPATCPSLELCSLR---CANGLRRDNIGCYVCECLPDEV------------------- 328

Qy    523 DAQNCEICECRPRPKKCRPI---ICDKYCPLGLLKNKHGCDICRCKKCPEL-SCSKICPL 578
                  |   :|| :   |:| |  | ||:: || :|:| ||| |  | | |
Db    329 ----------PTNPRCRELNDENCEKQCAHGYLKDEDGCTVCKCSKCPPLHQCHKHCLY 377

Qy    579 GFQQDSHGCLICKCREAS----------------ASAGPPILSGTCLTV--DGHH--HK 617
          ||: :| || :|||| :|                ::      |  |::   |||
Db    378 GFETNSAGCSLCKCRASSKLDKKQGTTKSTKLGAGSAQQTEYHSEKCISFSNDGHQIVRD 437

Qy    618 NEESWHDGCRECYCLNGREMCALITCPV-PA-CGNP--TIHPGQCCPSCADDFVVQKPEL 673
            | | |||| |:| | :| |:||:||  |: | :        :||||| |    :||:
Db    438 GGEWWSDGCRHCFCENKQEFCSLISCPTKPSDCADEKWVQKEDECCPSCIDQ--KKKPKS 495

Qy    674 STP--------SICHAPG-GEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLCQNPS 724
          |           ::| :|| |  | :|||| :  |  |||  | ||| |  |||: | ||
Db    496 SNSLAAQKHEHTVCQSPGTGRLFTDGETWQLAPCVSCTCRVGHVLCRTTECPPIACPNPE 555

Qy    725 -RTQDSCCPQCTDQPFRPSLSRNNSVPNYCKNDEGDIFL----AAESWKPDVCTSCIC-I 778
           : :: ||| | :|          | |  ||::||  :    |  :   | ||||:|
Db    556 YQNEEDCCPTCPEQ----------KVEN-TKNEKGDTIVCTDDAGTAHIVDDCTSCVCSA 604

Qy    779 DSVISCFSESC-PSVSCE-RPVLRKGQCCPYCIKDTIPKKVVCHFSGKAYADEERWDLDS 836
          :    |: |:|  |: |   |:: ||:||| |  | :    || :    ||  |:|
Db    605 EGSADCYKEACDESLECRGNPLVIKGKCCPVC-SDALSSSAVCSYQSSVYAIGEQWQDGR 663

Qy    837 CTHCYCLQ-GQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEV 895
          |::| |:  |||:|  : ||   | :|: :|| |||:| :
Db    664 CSNCSCVTGGQTVCRQMVCP--HCDDPVPIEGHCCPLCKD------------------- 701
```

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Qy    896 DLEVPLW-PTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDS--IASVVVPIIICLS 952
              | |    |     |  :|        |:     ||  |  : |::   :: |
Db    702 ----AKWSPYGYGNGSASFPTSLG--------PRVDDGNGSSATSLIVVSLMSLCVVALI 749

Qy    953 IIIAFLFINQKK 964
          |::  |:   ||
Db    750 IVLMLLYKRNKK 761
```

RESULT 14
AAM25238
ID AAM25238 standard; Protein; 193 AA.
XX
AC AAM25238;
XX
DT 16-OCT-2001 (first entry)
XX
DE Human protein sequence SEQ ID NO:753.
XX
KW Human; cancer; ulcer; HIV infection; human immunodeficiency virus;
KW antiinflammatory; antirheumatic; antiarthritic; immunosuppressive;
KW antibacterial; endocrine; cardiant; central nervous system; virucide;
KW anti-HIV; fungicide; antimutagen; cardiovascular; antianaemic; anaemia;
KW antiaggregant; haemostatic; vulnerary; antiulcer; osteopathic; eczema;
KW dermatological; antiallergic; antiasthmatic; antidiabetic; cytostatic;
KW neuroprotective; antidepressant; nootropic; antiparkinsonian; infection;
KW immunostimulant; gene therapy; antisense therapy; vaccine; inflammation;
KW antianaphylactic; rheumatoid arthritis; septic shock; pancreatitis;
KW cardiac dysfunction; neuropathology; cardiac anaphylaxis; autoimmunity;
KW genetic disease; haematopoietic disorder; platelet disorder; asthma;
KW thrombocytopaenia; osteoporosis; severe combined immunodeficiency;
KW allergic rhinitis; diabetes; multiple sclerosis; depression;
KW Alzheimer's disease; Parkinson's disease; neurodegenerative disorder;
KW neurological disorder.
XX
OS Homo sapiens.
XX
PN WO200153455-A2.
XX
PD 26-JUL-2001.
XX
PF 22-DEC-2000; 2000WO-US35017.
XX
PR 23-DEC-1999; 99US-0471275.
PR 21-JAN-2000; 2000US-0488725.
PR 25-APR-2000; 2000US-0552317.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Tang YT, Liu C, Drmanac RT;
XX
DR WPI; 2001-457603/49.
DR N-PSDB; AAH99179.
XX
PT Isolated human polynucleotides encoding polypeptides, useful for the
PT treatment and diagnosis of e.g. cancer, ulcers and HIV infection -
XX
PS Claim 20; Page 181; 1217pp; English.
XX
CC AAH99166 to AAH99904 encode the human proteins given in AAM25225 to
CC AAM25963. The proteins can have activities based on the tissues and
CC cells they are expressed in, such as: antiinflammatory; antirheumatic;
CC antiarthritic; immunosuppressive; antibacterial; endocrine; cardiant;
CC central nervous system; virucide; anti-HIV; fungicide; antimutagen;
CC cardiovascular; antianaemic; antiaggregant; haemostatic; vulnerary;
CC antiulcer; osteopathic; dermatological; antiallergic; antiasthmatic;
CC antidiabetic; cytostatic; neuroprotective; antidepressant; nootropic;
CC antiparkinsonian; and immunostimulant. The proteins and polynucleotides
CC encoding them can be used in gene therapy, antisense therapy and vaccine
CC production, The proteins and polynucleotides are useful for screening for
CC agonists or antagonists of a protein and for the treatment and diagnosis
CC of disorders associated with the activity of a protein e.g. inflammation,
CC rheumatoid arthritis, septic shock, pancreatitis, cardiac dysfunction,
CC neuropathology, cardiac anaphylaxis, viral, bacterial, HIV and fungal
CC infections, autoimmunity, genetic diseases, haematopoietic disorders,
CC anaemia, platelet disorders, thrombocytopaenia, wounds, burns, ulcers,
CC osteoporosis, severe combined immunodeficiency, eczema, allergic
CC rhinitis, asthma, diabetes, cancer, multiple sclerosis, depression,
CC Alzheimer's disease, Parkinson's disease, neurodegenerative and
CC neurological disorders.
XX
SQ Sequence 193 AA;

Query Match 17.5%; Score 1042; DB 22; Length 193;
Best Local Similarity 98.4%; Pred. No. 3.7e-52;
Matches 188; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

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Qy     10 LAGCGHLLVSLLGLLLLPARSGTRALVCLPCDESKCEEPRNRPGSIVQGVCGCCYTCASQ 69
          |||||||||||||||| |||||||||||||||||||| ||||||||||||||||||
Db      3 LAGCGHLLVSLLGLLLLLARSGTRALVCLPCDESKCEEPRNCPGSIVQGVCGCCYTCASQ 62

Qy     70 GNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLLGFKPCNENL 129
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     63 RNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLLGFKPCNENL 122

Qy    130 IAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCEVQFSPRCPE 189
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    123 IAGCNIINGKCECNTIRTCSNPFEFPSQDMCLSALKRIEEEKPDCSKARCEVQFSPRCPE 182

Qy    190 DSVLIEGYAPP 200
          ||||||||||
Db    183 DSVLIEGYAPP 193
```

RESULT 15
AAU83112
ID AAU83112 standard; Protein; 225 AA.
XX
AC AAU83112;
XX
DT 08-MAY-2002 (first entry)
XX
DE Novel secreted protein Z790708G1P.
XX
KW Protein secretion; mammalian secreted polypeptide; MSP.
XX
OS Homo sapiens.
XX
PN WO200202621-A2.
XX
PD 10-JAN-2002.
XX
PF 28-JUN-2001; 2001WO-US20638.
XX
PR 30-JUN-2000; 2000US-215446P.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Sheppard PO, Presnell SR;
XX
DR WPI; 2002-147999/19.
DR N-PSDB; ABK33027.
XX
PT Novel isolated mammalian secreted polypeptide useful in therapeutic and
PT diagnostic methods, to direct secretion of other proteins of interest
PT from host cell, as educational tools, and as laboratory practicum kits
PT -
XX
PS Claim 12; Page 135; 397pp; English.
XX
CC The invention describes an isolated mammalian secreted polypeptide (MSP)
CC (I). (I) is useful to direct the secretion of other proteins of interest
CC from a host cell, to monitor secretion of proteins, to degenerate
CC sequences comprising all nucleotide sequences encoding a particular
CC polypeptide, to screen for cell metabolism effecting receptors, for
CC identifying new target receptors and drug design, for identifying, for

CC protein purification, for determining the weight of expressed MSP
CC polypeptides as a ratio to total protein expressed, for identifying
CC peptide cleavage sites, for coupling amino and carboxy terminal tags, for
CC amino acid sequence analysis, for monitoring biological activities of the
CC protein in vitro and in vivo, and to teach analytical skills and as
CC reagents for the study of cells, receptors, and other binding molecules.
CC The polynucleotide is useful for radiation hybrid mapping, and somatic
CC cell genetic technique developed for constructing high-resolution,
CC contiguous maps of mammalian chromosomes. Reagents disclosed in the
CC invention may be used to detect metabolic abnormalities characterised by
CC over or under production of the protein. This is the amino acid sequence
CC of a mammalian secreted polypeptide, described in the method of the
CC invention.
XX
SQ Sequence 225 AA;

Query Match 9.8%; Score 582; DB 23; Length 225;
Best Local Similarity 97.3%; Pred. No. 7.1e-26;
Matches 107; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

```
Qy       1 MYLVAGDRGLAGCGHLLVSLLGLLLLPARSGTRALVCLPCDESKCEEPRNRPGSIVQGVC 60
           ||||||||||||||||||||||||| ||||||||||||||||||||| |||||||||
Db       1 MYLVAGDRGLAGCGHLLVSLLGLLLLLARSGTRALVCLPCDESKCEEPRNCPGSIVQGVC 60

Qy      61 GCCYTCASQGNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCE 110
           ||||||||| ||||||||||||||||||||||||||||||||||||||||
Db      61 GCCYTCASQRNESCGGTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCE 110
```

Search completed: March 14, 2003, 17:40:36
Job time : 50 secs